



Fermilab

Beams Division / RFI Department / HLRF Group

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Booster Supply and Return Watchdog Test Procedure

The Supply and Return Watch Dog Modules are standard NIM type modules. They require +/-24V and +6 for the interface electronics. The +/-15V power needed for the operational amplifiers is generated by two onboard regulators.

Watchdog Module Schematic Drawing Numbers

Watchdog Supply and Return Module DWG#: 0337.01-EC-63452

Bench Equipment Needed

- 1) NIM Crate with power supply.
- 2) Schematic
- 3) Bench Power Supply
- 4) Bench Oscilloscope
- 5) Digital Volt Meter with probes

Bench Check Out Procedure

- 1) Check out NIM Circuits Power supplies. (+/-24 and 6V)
- 2) Check out onboard regulators (+/-15) Circuits Power supplies.
- 3) Adjust +10 Volt AD27xx Precision voltage regulator for 10.0V at U9 Pin13 or at (T.P Yellow)
- 4) Adjust R6 set point at U4 pin1 (Gray Test Point) for 6.0V (Return = 60 PSI) / 3.0V for (Supply = 150 PSI). This is for the Higher Limit Trip.
- 5) Adjust R7 set point at U3 pin7 (Blue Test Point) for 1.8V for (Supply Only = 90 PSI). This is for the Lower Limit Trip.
- 6) Place a 10.0V source on the input of the Supply/Return module.
- 7) Using a DVM measure the analog output at U1 Pin1 (White Test Point). Should read 10.0V.

Sensors and Measuring Device Part Numbers

Supply Transducers: Setra Systems **Model 205-2** 0-500 PSI
Natick Mass USA

Return Transducers: Setra Systems **Model 205-2** 0-100 PSI
Natick Mass USA

Booster Acnet Parameters

Booster Tunnel

B:TLCWSP Tunnel 95 LCW Supply Pressure

B:TLCWRP Tunnel 95 LCW Return Pressure

Booster East Gallery

B:ELCWSP East 95 LCW Supply Pressure

B:ELCWRP East 95 LCW Return Pressure

Booster West Gallery

B:WLCWSP West 95 LCW Supply Pressure

B:WLCWRP West 95 LCW Return Pressure